Defining ML Model

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• ML Model
: Mathematical ~~model~~ functions with parameters and hyper-parameters

• Parameter
: Real - valued variable that changes during model training.

• Hyper - parameter
: A setting that we set before training and
which doesn't change afterwards.

<Introducing the Natality Dataset>

• Encode class Membership (Simplest way)
: Using binary.

• A way to map our line onto a <u>binary classification</u> rule
→ Rely on the sign of the output.

* gradient descent (An analytical solution is no longer an option)

Evaluate the parameters?
⇒ The space where the data live, are often themselves infinite,
it's not possible to evaluate.
→ So we ~~estimate~~ what this calculation would like using what we have,
our training data.
• loss function   of a group ←
                                                                    of predictions.
: Doing generalize from the quality of a prediction for a single data point,
which is <u>simply</u> the error of that prediction. to a number that captures the quality